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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/010,826 | 11/13/2001 | Geoffrey Schmit | 5150-57900 | 7730 |
| 7590 11/29/2004 | | | EXAMINER | |
| Jeffrey C. Hood Conley, Rose, & Tayon, P.C. P.O. Box 398 Austin, TX 78767 | | | CHANG, SUNRAY | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2121 | |

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/010,826

Applicant(s)

SCHMIT ET AL.

Examiner

Sunray Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20021202</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 59 are presented for examination.

Claims 1 – 59 are rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1 – 59 are rejected** under 35 U.S.C. 102(b) as being anticipated by Ryan O.

McDonald et al. (U.S. Patent No. 5,966,532, and referred to as McDonald hereinafter).

3. **Regarding independent claims 1, 20 – 21, and dependent claim 41,**

McDonald teaches,

- A memory medium comprising program instructions implementing a measurements expert system, [Abstract]
- Expert system is operable to perform [measurement application, Col. 8, Line 66]:
- Receiving a measurement task specification, wherein the measurement task specification specifies a measurement task; and [Col. 9, Lines 54 – 59]
- Analyzing the measurement task specification; and [Col. 9, Lines 54 – 59]
- Generating a run-time specification for the measurement task in response to said analyzing; [Col. 9, Lines 54 – 59] wherein

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- The run-time specification is useable to configure one or more measurement devices to perform the measurement task, [Col. 9, Lines 3 – 6 and 54 – 59] and wherein
 - The run-time specification [graphical program, Col. 10, Lines 11 – 12] is further useable to generate a run-time [graphical code, Col. 10, Lines 27 – 29] which is executable to perform the measurement task [controlling or modeling, Col. 10, Lines 13] using the configured one or more measurement devices [instrumentation or industrial automation hardware, Col. 10, Lines 13 – 14].
4. **Regarding dependent claims 2, 22, and 50**, McDonald teaches,
- The expert system comprises a plurality of experts, [Col. 10, Lines 3 – 6] and wherein
 - The expert system is further operable to perform: [Fig. 2]
 - System configuration of one or more channels for the measurement task; [selecting a control, Col. 10, Line 58 – Col. 11, Line 7]
 - Task creation for the measurement task; [Col. 11, Lines 8 – 20]
 - Task configuration for the measurement task; and [Col. 12, Lines 8 – 19]
 - Task verification for the measurement task. [Col. 14, Lines 34 – 36]
5. **Regarding dependent claims 3, 23, and 51**, McDonald teaches,
- Configuring the one or more channels with fully qualified channel paths specifying one or more of a terminal configuration, [Col. 10, Lines 11 – 14, Fig. 1 and Col. 8, Line 35 – 48]
 - An expert associated with the terminal configuration, and capabilities of the expert; [Col. 10, Lines 15 – 21] and

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- Setting one or more attributes [parameter values, Col. 12, Lines 37 – 38] for the one or more channels based upon installed measurement devices [Fig. 1].

6. **Regarding dependent claims 4, 24, and 52, McDonald teaches,**

- A plurality of device experts and a plurality of channel experts; [Col. 10, Lines 49 – 57 and 35 – 37]
- Building a device expert call tree [graphical code portion or template, Col. 11, Line 26] based on the channel configuration [desired type of graphical code generation wizard, Col. 10, Lines 35 – 37];
- One or more of the plurality of device experts [commonly used code, Col. 10, Line 38 – 39];
- One or more of the experts [graphical programming system, Col. 10, Line 3] used to generate the run-time specification [graphical code, Col. 10, Line 5] from the measurement task specification [data, Col. 10, Lines 12 – 14];
- Initializing the one or more device experts with initialization information; [Col. 11, Lines 8 – 20]
- One or more of the device expert's parent and children in the device expert call tree [wizard related data, Col. 16, Line 29], information indicating the state of the measurement task [Col. 16, Lines 29 – 53], and hardware capabilities of the device [Col. 10, Lines 18 – 23];
- Creating one or more channel experts for each of the one or more channels, wherein each device expert corresponds to at least a subset of the one or more channel experts, wherein said at least a subset of the one or more channel experts corresponds to the device expert; [Col. 10, Lines 49 – 57] and

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- Restoring properties of the one or more channels and the measurement task specification from persistent storage. [Col. 11, Lines 21 – 41]
7. **Regarding dependent claims 5, 11, 25, 30, and 53,** McDonald teaches,
- Configuring one or more properties of the one or more channels; [Col. 10, Lines 11 – 23] and
 - Configuring one or more timing properties [manner, Col. 10, Lines 63 – 65] of the measurement task specification [parameters, Col. 10, Lines 35 – 41].
8. **Regarding dependent claims 6, 26, 30, and 54,** McDonald teaches,
- Invoking one or more device experts to analyze one or more channel properties of the measurement task specification; [Col. 10, Lines 58 – 61]
 - Invoking the one or more device experts to analyze one or more timing properties of the measurement task specification; [Col. 10, Lines 63 – 65] and
 - Compiling [generation, Col. 10, Line 24] the measurement task specification [parameters, Col. 10, Lines 49 – 57] to the run-time specification [graphical code, Col. 10, Line 24].
9. **Regarding dependent claims 7, 13, 27, 32, 55, and 58,** McDonald teaches,
- A device expert call tree; [graphical code portion or template, Col. 11, Line 26]
 - Invoking one or more of the plurality of device experts starting at a corresponding leaf of the device expert call tree; [Col. 10, Lines 58 – 61]
 - Invoking the one or more device experts starting at the root of the device expert call tree; [Col. 10, Lines 63 – 65, and Col. 11, Lines 35 – 37] and

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- Invoking each of the device experts in the device expert call tree to compile an associated portion of the measurement task specification into the run-time specification starting at the root of the device expert call tree. [Col. 10, Lines 24 and 49 – 57]

10. **Regarding dependent claim 8**, McDonald teaches,

- The measurement task specification may be compiled for different measurement systems without modification. [Col. 11, Lines 21 – 41]

11. **Regarding dependent claims 9, 28, and 56**, McDonald teaches,

A plurality of experts [Col. 11, Lines 21 – 24], wherein the expert system is operable to: create a device expert call tree [pre-developed portion of graphic code, Col. 10, Line 36] of one or more experts from the plurality of experts [graphical code portion or template, Col. 11, Line 26] according to a user-specified measurement task configuration [Col. 11, Lines 8 – 10]; manage the configuration of the measurement task specification [select the desired type, Col. 11, Lines 35 – 37]; and verify the measurement task specification and compile the measurement task specification into the run-time specification [Col. 14, Lines 34 – 36].

12. **Regarding dependent claims 10, and 29**, McDonald teaches,

- A plurality of device experts [pre-developed portion of graphical code, Col. 10, Line 36] and a plurality of channel experts [desired type of graphical code generation wizard, Col. 10, Lines 35 – 37];

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- Building the device expert call tree based on channel configuration information, one or more of the plurality of device experts; [Col. 12, Lines 8 – 11] and
- One or more of the plurality of experts used to generate the run-time specification from the measurement task specification; [Col. 10, Lines 11 – 23]
- Initializing the one or more device experts with initialization information; [Col. 11, Lines 8 – 14]
- One or more of the device expert's parent and children [wizard related data Col. 16, Line 29] in the device expert call tree [graphical code portion or template, Col. 11, Line 26], information indicating the state of the measurement task [wizard state information, Col. 16, Line 31], and hardware capabilities of the device [Col. 10, Lines 18 – 23]; and
- Creating one or more channel experts for each of the one or more channels, wherein each device expert corresponds to at least a subset of the one or more channel experts, wherein said at least a subset of the one or more channel experts corresponds to the device expert [Col. 10, Lines 49 – 57].

13. **Regarding dependent claims 14, 33, and 59, McDonald teaches,**

- A plurality of experts, including one or more of device experts [pre-developed portion of graphical code, Col. 10, Line 36], channel experts [desired type of graphical code generation wizard, Col. 10, Lines 35 – 37], timing experts [Col. 10, Lines 58 – 67], reader/writer experts [load/save, Fig. 10], control experts [add/delete, Fig. 10], and streaming experts wizard registry file, Fig. 10], each expert is responsible for managing different aspects of the measurement task specification [Fig. 10].

14. **Regarding dependent claims 15 and 45**, McDonald teaches,

- The expert system is further operable to validate the measurement task specification. [Col. 14, Lines 34 – 36]

15. **Regarding dependent claims 16 and 34**, McDonald teaches,

- A plurality of measurement sub-tasks [subset, Col. 49 – 57, and sub-VI, Col. 17, Line 34].

16. **Regarding dependent claims 17 and 35**, McDonald teaches,

- A complex measurement operation using a plurality of measurement devices. [Col. 2, Line 14 – 25]

17. **Regarding dependent claims 18 and 36**, McDonald teaches,

- a hardware measurement device. [100, Fig. 1]

18. **Regarding dependent claims 19 and 37**, McDonald teaches,

- a virtual measurement device. [Virtual instrument, Col. 11, Line 5, and measurement application, Col. 8, Line 66]

19. **Regarding dependent claims 38 – 40**, McDonald teaches,

A measurement task specifier generating the measurement task specification in response to user input prior to said receiving. [Col. 11, Lines 8 – 20]

19. **Regarding dependent claims 38 and 39**, McDonald teaches, generating the measurement task specification in response to user input prior to said receiving.

20. **Regarding dependent claims 42 and 43**, McDonald teaches,

- Receiving user input indicating system configuration parameters; [Col. 11, Line 8 – 41] and
- Setting system configuration parameters for the one or more measurement devices [100, Fig. 1] in response to said receiving user input. [Col. 11, Line 8 – 41]

21. **Regarding dependent claim 44**, McDonald teaches,

- The measurement program specification is a run-time specification. [graphical program, Col. 10, Lines 11 – 12]

22. **Regarding dependent claim 47**, McDonald teaches,

- A plurality of measurement expert software programs [graphical code generation wizard, Col. 11, Line 22];
- The plurality of measurement expert software programs include the first software program. [Col. 11, Lines 8 – 9]

22. **Regarding independent claim 44, and 48 – 49**, McDonald teaches,

- A first software program operable to analyze a received measurement task specification; [Col. 11, Lines 8 – 20]

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- A validation software program operable to validate the measurement task specification;
- A generation software program [graphical code generation wizard menu item] operable to generate a measurement program specification for the measurement task [control]; [Col. 11, Lines 11 – 15] and
- A measurement program builder, operable to:
 - Analyze the measurement program specification; [data analysis, Col. 22, Line 23]
 - Configure one or more measurement devices according to the measurement program specification; [Col. 12, Lines 8 – 19] and
 - Generate the measurement program, wherein the measurement program is executable to perform the measurement task. [Col. 9, Lines 54 – 59]

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McDonald et al. (U.S. Patent No. 6,053,951) discloses an MMI, a generation wizard, a graphical code, a measurement application, and a virtual instrument. Dharnipragada et al. (U.S. Patent No. 6,490,493) discloses a managing process device, a measurement instruments and values, receiving process requirements, specifying a process device meeting process requirements, decision making, and sequences of instructions.

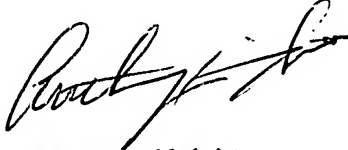
24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunray Chang whose telephone number is (571) 272-3682. The examiner can normally be reached on M-F 7:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-746-3506.

Sunray Chang
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Anthony Knight
Supervisory Patent Examiner
Group 3600

November 23, 2004